



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/755,661	01/12/2004	Liesbeth M. Longueville	02-510	9307
719	7590	08/10/2007	EXAMINER	
Caterpillar Inc. Intellectual Property Dept. AB 6490 100 N.E. Adams Street PEORIA, IL 61629-6490			BROWN, DREW J	
			ART UNIT	PAPER NUMBER
			3616	
			MAIL DATE	DELIVERY MODE
			08/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/755,661

Applicant(s)

LONGUEVILLE ET AL.

Examiner

Drew J. Brown

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/7/07 (amendment).
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-13, 15-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 18, 20 and 21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. 8/6/07.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to the amendment after final filed on 5/7/07. Claims 1 and 2 have been amended and new claims 15-21 have been added.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 7, 8, 12, 13, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Perry (U.S. Pat. No. 5,366,036).

Perry discloses a device (54 and 226) configured to control select functions of a machine (20), wherein the machine includes an operator's station including a seat (Figure 1). An interface module (54) has a connecting portion (end of linkage 236 containing pin 238) and a working portion (Figure 10), wherein the interface module connecting portion is configured to be pivotally connected directly to the at least one armrest (Figure 8) associated with the seat in the machine and is adapted to shift the working portion laterally between a retracted position stored mode and an extended position working mode relative to the at least one armrest (column 9, lines 40-49) such that, in the retracted position, the interface module working portion is moved within a predetermined range of motion such that a portion of the working portion is at least partially concealed by the at least one armrest (as shown by the dashed lines in Figure 8, when the working portion is in the retracted position, it is partially concealed by the armrest when viewed from the right side of the armrest in Figure 8; in other words, in the point of view from someone standing on the right of the armrest, at least part of the working portion is concealed from sight). When selecting the interface module working portion working mode, the interface module working portion is moved laterally away from the at least one armrest until the working portion is substantially free from obstruction by the at least one armrest (solid lines in Figure 8).

With respect to claims 7, 8, and 15, an interface module connecting mechanism (226) is adapted to pivotally interconnect the interface module connecting portion and the at least one

Art Unit: 3616

armrest. The at least one armrest has upper and lower surface portions and the interface module connecting mechanism includes a pivot pin (238) connectably engageable with the interface module connecting portion and the at least one armrest along an axis of rotation substantially perpendicular to the at least one of the armrest surface portions (Figure 8). The interface module connecting mechanism includes a linkage (236) having a first end portion connectable to the interface module connecting portion and a second end portion connectable to the at least one armrest (Figure 8), and the linkage includes at least a first and second link arms (Figure 8), wherein each of the first and second link arms are spaced apart from the other and have first end portions pivotally connectable to the interface module connecting portion and second end portions pivotally connectable to the at least one armrest (Figure 8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perry in view of Palmeri et al. (U.S. Pat. No. 6,065,560).

With respect to claim 6, Perry discloses that the interface module includes a plurality of actuating devices associated with the respective machine functions (Figure 4), wherein the plurality of actuating devices are arranged on a surface of the working surface at respective locations selected to facilitate manual manipulation of the actuating devices.

Although Perry does not disclose that the working portion of the interface module includes an upwardly convex generally ovoid surface, the working portion (28) of the interface module (20) of Palmeri does have an upwardly convex, generally ovoid surface.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Perry in view of the teachings of Palmeri et al. to have the working portion of the interface module include an upwardly convex generally

Art Unit: 3616

ovoid surface, since it has generally been recognized that changing the shape of an element while performing the same task equally well involves only routine skill in the art.

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Perry in view of Klaassen (U.S. Pat. No. 4,478,308).

Perry discloses the claimed invention as discussed above and that a right-hand armrest includes an interface module having a right-hand configuration determined in response to the respective right-hand position of the associated armrest.

However, Perry does not disclose the same for a left-hand armrest. Klaassen does disclose that both right and left-hand armrests with corresponding interface modules can be used in the same machine.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Perry et al. in view of the teachings of Klaassen to have a left-hand armrest and corresponding interface module in order to have more controls available to the driver.

6. Claims 1-3, 6-10, 12, 13, 15, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson et al. (U.S. Pat. No. 5,617,929) in view of Palmeri et al. (U.S. Pat. No. 6,065,560).

With respect to claims 1, 12, and 13, Richardson et al. discloses a device (10) configured to control select functions of a machine (16), wherein the machine includes an operator's station (Figure 1) including a seat (12). An interface module (38) has a connecting portion (47) and a working portion (42), wherein the interface module is adapted to shift the working portion laterally between a retracted position stored mode and an extended position working mode (column 1, lines 57-64).

Richardson et al. does not disclose at least one armrest being supportably positionable adjacent to the seat, wherein the interface module connecting portion is "configured to be" pivotally connected directly to the at least one armrest associated with the seat in the machine. Palmeri et al., however, does disclose at least one armrest being supportably positionable adjacent to the seat (Figure 1), wherein the interface module connecting portion is configured to

Art Unit: 3616

be pivotally connected directly to the at least one armrest (via seat 12 of Richardson et al.) associated with the seat in the machine. In the retracted position, the interface module working portion is moved within a predetermined range of motion such that a portion of the working portion is at least partially concealed by the at least one armrest (when the connecting portion is directly or indirectly connected to the armrest as modified by Palmeri, the working portion is at least partially hidden from view from the point of view of someone to the left of the driver's seat as shown in Figure 1 of Richardson et al.). When selecting the interface module working portion working mode, the interface module working portion is moved laterally away from the at least one armrest until the working portion is substantially free from obstruction by the at least one armrest (Figure 1).

The functional recitation that the connecting portion is configured to be pivotally connected directly, does not serve to distinguish because it is narrative in form. The recitation is not supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. Further, it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. Accordingly, the connecting portion of Richardson is "configured to be" pivotally connected directly to the at least one armrest as claimed.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Richardson et al. in view of the teachings of Palmeri et al. to have an armrest attached to the seat so the driver can rest his/her arm when the interface module is in the retracted position.

With respect to claim 2, wherein in the retracted position (Figure 2 of Richardson), the interface module working portion is at least partially concealed by the at least one armrest and in the extended position (Figure 1 of Richardson) the interface module working portion is substantially free from obstruction by the at least one armrest.

With respect to claims 3, 16, and 19, Richardson et al. discloses that the at least one armrest has upper and lower surface portions and that the interface module working portion moves laterally between the retracted and extended positions along a first plane extending generally horizontally (column 1, lines 57-64) below the at least one armrest lower surface portion and at an elevational position sufficient that the interface module working portion is at

Art Unit: 3616

least partially located below the at least one armrest lower surface portion when the interface module working portion is in the retracted position (Figure 2).

With respect to claim 6, the interface module includes a plurality of actuating devices associated with the respective machine functions (Figure 4), wherein the plurality of actuating devices are arranged on a surface of the working surface at respective locations selected to facilitate manual manipulation of the actuating devices.

Although Richardson does not disclose that the working portion of the interface module includes an upwardly convex generally ovoid surface, the working portion (28) of the interface module (20) of Palmeri does have an upwardly convex, generally ovoid surface.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Richardson et al. in view of the teachings of Palmeri et al. to have the working portion of the interface module include an upwardly convex generally ovoid surface, since it has generally been recognized that changing the shape of an element while performing the same task equally well involves only routine skill in the art.

With respect to claims 7 and 15, Richardson et al. discloses an interface module connecting mechanism (28) adapted to pivotally interconnect the interface module connecting portion and the at least one armrest (via seat 12).

With respect to claim 8, Richardson et al. discloses that the at least one armrest has upper and lower surface portions and that the interface module connecting mechanism includes a pivot pin (34) connectably engageable with the interface module connecting portion and the at least one armrest along an axis of rotation substantially perpendicular to the at least one of the armrest surface portions.

With respect to claim 9, Richardson et al. discloses that the interface module connecting mechanism includes a linkage having a first end portion (36) connectable to the interface module connecting portion and a second end portion (32) connectable to the at least one armrest.

With respect to claim 10, Richardson et al. discloses that the linkage includes at least first (28) and second (30) link arms, wherein each of the first and second link arms are spaced apart one from the other (Figure 1) and have first end portions (36) pivotally connectable to the interface module connecting portion and second end portions (32) pivotally connectable to the at least one armrest.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Richardson et al. in view of Palmeri et al., and further in view of Klaassen (U.S. Pat. No. 4,478,308).

The combination of Richardson et al. and Palmeri et al. discloses the claimed invention as discussed above and that a right-hand armrest includes an interface module having a right-hand configuration determined in response to the respective right-hand position of the associated armrest.

However, the combination does not disclose the same for a left-hand armrest. Klaassen does disclose that both right and left-hand armrests with corresponding interface modules can be used in the same machine.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the invention of Richardson et al. in view of the teachings of Klaassen to have a left-hand armrest and corresponding interface module in order to have more controls available to the driver.

Allowable Subject Matter

8. Claims 4, 5, 18, 20, and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 5/7/07 have been fully considered but they are not persuasive.

On pages 11-13 Applicant argues that the cited references do not recite "said interface module connecting portion being configured to be pivotally connected directly to said at least one armrest...such that, in said retracted position, said interface module working portion is at least partially concealed by said at least one armrest. However, the Examiner maintains that the rejection is proper as discussed above. Applicant has attempted to amend around the functional language "connectable" as previously presented in claim 1 to recite that it is "configured to be pivotally connected directly"; however, this language is still functional. Also, whether the

Art Unit: 3616

connecting portion is connected directly or indirectly to the armrest, the working portion is at least partially concealed by the at least one armrest at a certain point of view.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Drew J. Brown
Examiner
Art Unit 3616

db
8/6/07

 8/6/07
PAUL N. DICKSON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600